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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/706,948	11/06/2000	Babak Hodjat	DEJI 1001-1	6014

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HAYNES BEFFEL & WOLFELD LLP
P O BOX 366
HALF MOON BAY, CA 94019

EXAMINER
ZHEN, LI B

ART UNIT	PAPER NUMBER
2126	10

DATE MAILED: 12/29/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on 03 October 2003.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-18* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-18* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

13)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application)
since a specific reference was included in the first sentence of the specification or in an Application Data Sheet.
37 CFR 1.78.

    a) ☐ The translation of the foreign language provisional application has been received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific
reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .

4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: .

DETAILED ACTION

Claim Rejections - 35 USC § 103

1.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

2.   Claims 1 – 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Patent No. 6,260,059 to Ueno in view of U.S. Patent No. 6,304,864 to Liddy.

As to claim 1, Ueno teaches a subject message [messages] for use with a

network of agents [knowledge provider agents which are mutually connected for

exchange of messages; column 10, lines 60 – 67] each having a view of its own domain

of responsibility [knowledge base and/or rule base information relating to any particular

subject, stored at a knowledge provider agent; col. 2, lines 49 – 54], comprising:

receiving from an upchain agent ["User" is the identifier of the requesting user;

column 12, lines 22 – 23] a query [a string "ask", signifying that this is an information

request message; column 12, lines 20 – 25] inquiring whether at least part of the subject

message is within the domain of responsibility of the first agent [a message matching

section 102-1 which is capable of registering a received message... and which

compares first the entire message, then specific parts of the message, with

predetermined parts of data which are held in the script storage section 103; column 11,

lines 10 – 40];

querying at least one agent downchain [propagation destination agents] of the

first agent whether the queried agent considers at least part of the subject message

[col. 11, lines 10 – 40] to be in the queried agent's domain of responsibility [the received

message are supplied to the propagation message generating section 104, which

originates a propagation message...containing the received message contents but is

addressed to each of a predetermined plurality of other ones of the agents...such

predetermined other ones of the agents will be referred to in the following as the

propagation destination agents; column 11, lines 49 – 60];

responding to the upchain agent tentatively whether at least part of the subject

message is within the domain of responsibility of the first agent [agentA generates a

response message addressed to the requesting user, containing the information that

has been requested; col. 13, lines 1 – 15; see Fig. 2] before the first agent receives all

responses from the agents downchain of the first agent [agentC achieves successful

matching of the message contents...it generates a response message that is addressed

to the agent which originated the received propagation message; col. 12, line 20 – col.

13, line 15; see Fig. 2]. Examiner notes that the first agent [agentA] does not receive all

responses from all the downchain agents [agentB does not send a response to agentA]

before it sends a responds to the upchain agent [user]. Ueno teaches [col. 2, lines 49 –

54] an agent that contains knowledge base and/or rule base information relating to any

particular subject, but does not specifically teach a natural language interpretation.

However, Liddy teaches deriving user intent from a subject message [natural

language processor enables the agent server to determine the subject categories and

important terms of the query; col. 3, line 60 – col. 4, line 20] and agents having a view of

its own natural language interpretation domain [trains this neural network in accordance

with test patterns based on the natural language processed query, and then embeds the

neural network in each of the crawler and meta-search agents; col. 4, lines 1 - 60].

It would have been obvious to a person of ordinarily skilled in the art at the time

of the invention to apply the teaching of agents having a view of its own natural

language interpretation domain as taught by Liddy to the invention of Ueno because this

allows for the retrieving information from the Internet using multiple intelligent agents

and natural language processing of the query for building the artificial neural network for

the agents, and natural language processing of the retrieved documents to be applied to

the artificial neural network of agents [col. 3, lines 28 - 36 of Liddy].

As to claim 5, Ueno as modified teaches processing a subject message by a

network of agents including an originating agent of the originating agent, each agent in

the network having a view of its own natural language interpretation domain [see the

rejection to claim 1 above], comprising:

querying at least one of the agents downchain [propagation destination agents;

column 11, lines 49 – 60 of Ueno] of the originating agent in the network a first time,

whether the queried agent considers at least part of the subject message to be in the

queried agent's natural language interpretation domain [see claim 1 above], the first

query including a first depth-of-search indication ["Count" is a number whose initial

value determines the number of agents from which response information sets are to be

obtained; column 21, lines 40 – 67 of Ueno];

resolving any conflicting responses from the queried agents to identify a

prevailing one of the downchain agents to whom the subject message should be passed

[each agent 600 includes a processing information request message generating section

507; column 20, line 61 – column 21, line 13 of Ueno]; and

instructing the prevailing agent to handle at least part of the subject message [If

agentC achieves successful matching of the message contents with its script and

thereby obtains the necessary response information set, it generates a response

message that is addressed to the agent which originated the received propagation

message; column 12, lines 54 – 60 of Ueno].

As to claim 11, Ueno as modified teaches processing a subject message by a

network of agents including an originating agent and at least one agent downchain of

the originating agent, each agent in the network having a view of its own natural

language interpretation domain [see the rejection to claim 1 above], comprising:

querying at least one of the agents downchain [propagation destination agents;

column 11, lines 49 – 60 of Ueno] of the originating agent in the network a first time,

whether the queried agent considers at least part of the subject message to be in the

queried agent's natural language interpretation domain [see claim 1 above];

subsequently querying the queried agents a second time [re-executing the

second matching operation] whether the queried agent considers at least part of the

subject message to be in the queried agent's natural language interpretation domain

[repetitively executing operations of...when the second matching operation is not

successful, reading out one of the alias character strings for one of the data

fields...replacing a character string which is currently defined for the field in the content

format descriptor...and re-executing the second matching operation; col. 6, lines 1 – 31

of Ueno];

resolving any conflicting responses from the queried agents to identify a

prevailing one of the downchain agents to whom at least part of the subject message

should be passed [each agent 600 includes a processing information request message

generating section 507; column 20, line 61 – column 21, line 13 of Ueno]; and

instructing the prevailing agent to handle at least part of the subject message [If

agentC achieves successful matching of the message contents with its script and

thereby obtains the necessary response information set, it generates a response

message that is addressed to the agent which originated the received propagation

message; column 12, lines 54 – 60 of Ueno].

As to claim 2, Ueno as modified teaches the first agent responding further to the

upchain agent whether at least part of the subject message is within the natural

language interpretation domain of the first agent, after the first agent receives at least

one additional response from the agents downchain of the first agent [agentC achieves

successful matching of the message contents with its script and thereby obtains the

necessary response information set, it generates a response message that is

addressed to the agent which originated the received propagation message...when this

message is received by agentA, that agent generates a response message addressed

to the requesting user; column 12, line 54 - column 13, lines 10 of Ueno].

As to claims 3 and 4, Ueno as modified teaches the first agent responding in response to a second query received by the first agent from the upchain agent inquiring whether at least part of the subject message is within the natural language interpretation domain of the first agent [matching success is achieved for each of said first, second and third matching operations, generating a response message having said response information set as the content portion thereof and having the sender identifier of said received request message as the destination identifier thereof, and transmitting said response message via said network; column 3, lines 39 – 56 of Ueno].

As to claims 6 and 10, Ueno teaches determining whether a depth of the first agent [count value] exceeds the depth-of search indication [threshold value], and if so, disclaiming the subject message [since the count value at this stage reached the threshold value, agent2 will generate a response message conveying all of the appended response information sets, to be sent back to the "Sender" identified in the information collection message; column 23, lines 14 – 21].

As to claims 7 and 13, Ueno as modified teaches determining whether at least part of the subject message is within the first agent's natural language interpretation domain [see claim 1], and if so, returning a response to the originating agent claiming at least part of the message [agent1...executes the next line of the script, and so performs successive Rule and Knowledge matching processing as described for the first embodiment, to obtain the response information set; column 22, lines 18 – 50 of Ueno].

As to claims 8 and 15, Ueno as modified determining whether at least part of the subject message is within the first agent's natural language interpretation domain [see

claim 1], and where the subject message is not within the first agent's natural language

interpretation domain but the first agent has further agents downchain of the first agent,

querying at least one of the further agents whether the further agent considers at least

part of the subject message to be in the further agent's natural language interpretation

domain [if as a result of the matching processing it is found that the required knowledge

information is not available, then the contents of the received message are supplied to

the propagation message generating section 104, which originates a propagation

message... addressed to each of a predetermined plurality of other ones of the agents;

column 11, lines 48 – 62 of Ueno]

As to claim 9, see the rejection to claim 11.

As to claim 12, Ueno teaches the prevailing agent is a community of agents [a

plurality of knowledge provider agents; column 3, lines 1 – 15].

As to claim 14, Ueno as modified teaches determining whether at least part of

the subject message is within the first agent's natural language interpretation domain

[see claim 1], and where the subject message is not within the first agent's natural

language interpretation domain and the first agent has no further downchain agents,

returning a response to the originating agent disclaiming the subject message [if

complete matching is not successful...aliases contained in the Expansion segment are

to be successively inserted into predetermined fields of the content format descriptor in

the Rule segment, with the matching processing being sequentially repeated using

these aliases until complete matching successful is achieved or all of the aliases have

been tried; column 24, lines 50 – 60 of Ueno].

As to claim 16, Ueno teaches providing to each of the queried agents a first depth-of-search indication for the subject message [information collection request message having the format: "ask_all(User,Agent,Count,Order)"..."Count" is a number whose initial value determines the number of agents from which response information sets are to be obtained; column 21, lines 52 – 67], and wherein the step of querying a second time comprises the step of providing to each of the queried agents a second depth-of-search indication for the subject message, the second depth-of-search indication indicating a deeper search than the first depth-of-search indication [the value of Count is decremented by 1, i.e. NewCount takes the value 1 (step S6 in FIG. 23). In that case, the next portion of the script is executed to generate an information collection message to be sent to one propagation destination agent; column 22, lines 33 – 50].

As to claim 17, this is a combination of claims 13 and 15; note the rejections to claims 13 and 15 above.

As to claim 18, Ueno teaches receiving a group of at least one response [response information set] from the further agents downchain of the first agent, in response to the step of querying the further agents [agentC achieves successful matching of the message contents with its script and thereby obtains the necessary response information set, it generates a response message that is addressed to the agent which originated the received propagation message; column 12, line 54 – column 13, line 10], and returning a response to the originating agent in response to the step of receiving [when this message is received by agentA, that agent generates a response message addressed to the requesting user; column 12, line 54 - column 13, line 10].

Response to Arguments

Applicant argues that the "count" of Ueno is not the same as the "depth-of-search" indication of the present application because the "depth-of-search...indicates the maximum number of agents that a query search should be sent through along a chain regardless of which ones provides a response" [p. 16, lines 4 – 8]. The examiner respectfully disagrees because the "count" of Ueno clearly indicates the maximum number of agents that a query search should be sent through [since the count value at this stage reached the threshold value, agent2 will generate a response message; col. 23, lines 15 – 20] and since the agents of Ueno are arranged as a chain of agents [see Fig. 2] the "count" of Ueno also indicates a depth-of-search.

Conclusion

3.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Li B. Zhen whose telephone number is (703) 305-3406.

The examiner can normally be reached on Mon - Fri, 8:30am - 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Meng-Ai An can be reached on (703) 305-9678. The fax phone number for

the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or

proceeding should be directed to the receptionist whose telephone number is (703) 305-

3900.

<div style="text-align: right;">

Li B. Zhen
Examiner
Art Unit 2126

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lbz
December 22, 2003

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THOMAS LEE
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100

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